

# Oncology Clinical Pathways

## Acute Myeloid Leukemia (AML)

July 2023 – V1.2023



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# Acute Myeloid Leukemia – Presumptive Conditions

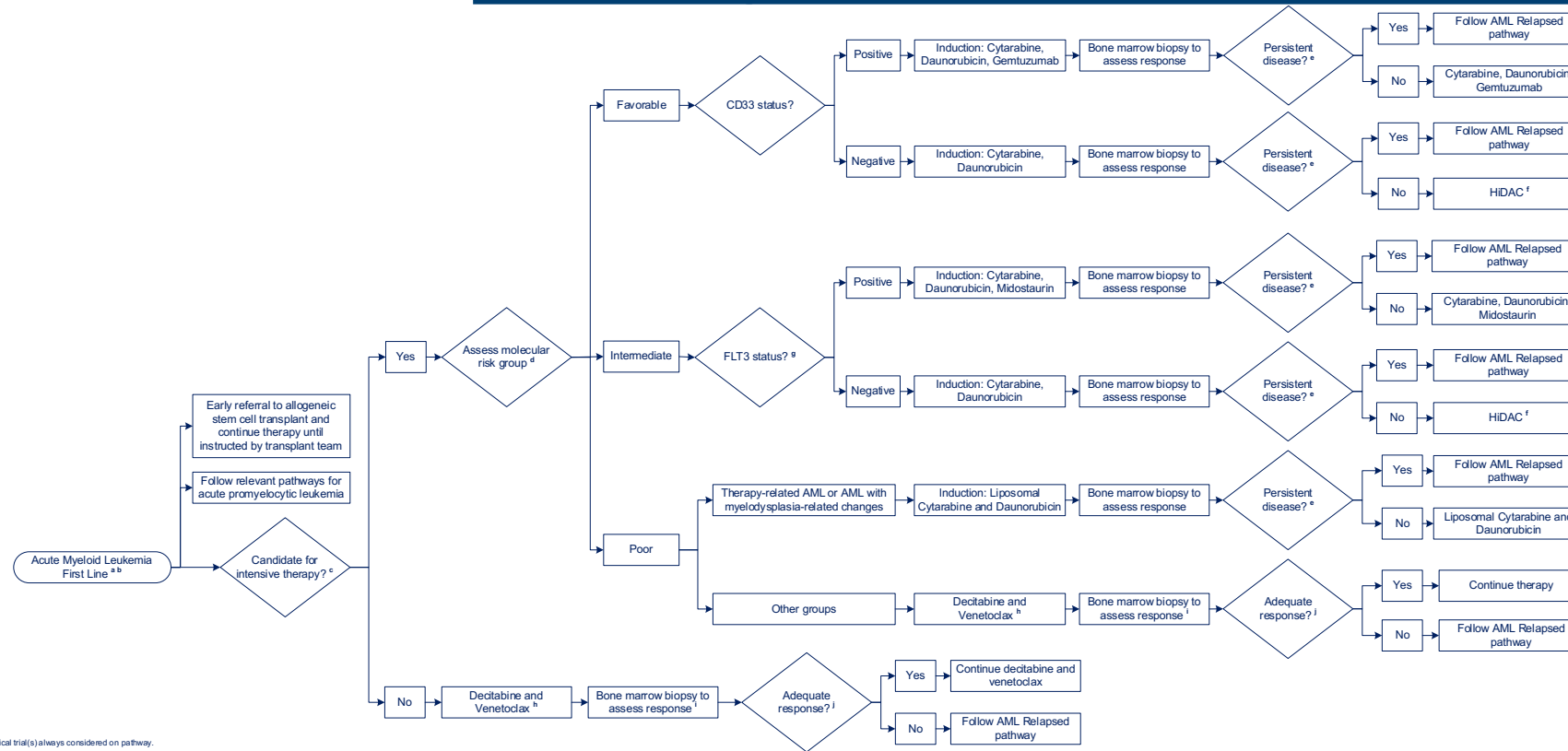
VA automatically presumes that certain disabilities were caused by military service. This is because of the unique circumstances of a specific Veteran's military service. If a presumed condition is diagnosed in a Veteran within a certain group, they can be awarded disability compensation.

## Atomic Veterans – Exposure to Ionizing Radiation

- All forms of leukemia

For more information, please visit [U.S. Department of Veterans Affairs - Presumptive Disability Benefits \(va.gov\)](https://www.va.gov/presumptive-disability-benefits/)

# Acute Myeloid Leukemia – First Line



Clinical trial(s) always considered on pathway.

<sup>a</sup> **Diagnosis** must include flow cytometry, karyotype, rapid order (<72 hours) molecular tests (to include: FLT3, NPM1, IDH1, and IDH2), and myeloid NGS test (at minimum must include: ASXL1, BCOR, CEBPA, EZH2, FLT3, IDH1, IDH2, NPM1, RUNX1, SF3B1, SRSF2, STAG2, TP53, U2AF1, and ZRSR2); additional optional genes include: CBL, DDX41, KIT, KRAS, NRAS, and other genes associated with myeloid neoplasms; AML FISH testing can also be performed, either up front, or at the discretion of the pathologist (can include: -5/q, -7/7q, KMT2A, t(8;21) RUNX1::RUNX1T1, t(15;17) PML::RARA, t(16;16) or inv(16) CBFB::MYH11, t(9;22) BCR::ABL1, and TP53)

<sup>b</sup> **Supportive Care** includes transfusions with leukocyte depleted/irradiated units for patients who are transplant candidates; platelet transfusion for platelet  $\leq 10$  per 10,000/mm<sup>3</sup>, pRBC transfusion for Hgb < 7 g/dL, cryoprecipitate for fibrinogen < 150 mg/dL; tumor lysis syndrome monitoring, allopurinol and IV fluid prophylaxis, and rasburicase treatment if needed for patients with high WBC, hyperuricemia, and/or renal dysfunction; infection prophylaxis is recommended e.g., fungal, HSV/VZV, and bacterial

<sup>c</sup> **Candidate for Intensive Therapy** assess by age, performance status, comorbidities, and social factors; useful tool is the Fred Hutch Treatment Related Mortality Calculator; echocardiogram is required if considering intensive therapy; candidates for intensive therapy assumes that the patient is a transplant candidate; early HLA typing recommended

<sup>d</sup> **Risk Group Classification** determined via guidelines such as European LeukemiaNet (ELN) or National Comprehensive Care Network (NCCN)

<sup>e</sup> **Persistent Disease** second induction may be appropriate based on depth of response and regimen used

<sup>f</sup> **HIDAC** "High Dose" Cytarabine Consolidation; dosing schedule may be on days 1-3 or days 1, 3, and 5; monitoring for neurologic (cerebellar) toxicity required; supportive care with steroid eye drops required

<sup>g</sup> **FLT3 Status** mutation defined as point mutation in the tyrosine kinase domain (TKD) or internal tandem duplication (ITD) mutation

<sup>h</sup> **Venetoclax** has many drug-drug interactions; consultation with oncology pharmacist is recommended; anti-infection prophylaxis recommended particularly when the patient has neutropenia, e.g., fungal, HSV/VZV, and bacterial; dose modifications (duration, dose, frequency) of venetoclax are frequently needed based on blood cell counts; regular bone marrow biopsies to assess and follow response are needed with this continuous therapy

<sup>i</sup> **Bone Marrow Biopsy After Decitabine and Venetoclax** variability in response times

<sup>j</sup> **Adequate Response** defined as at minimum a partial remission

AML Acute Myeloid Leukemia

Clinical Trial Resources <https://clinicaltrials.gov/> and <https://ils-forms.careboxhealth.com/?IRC=HCP>



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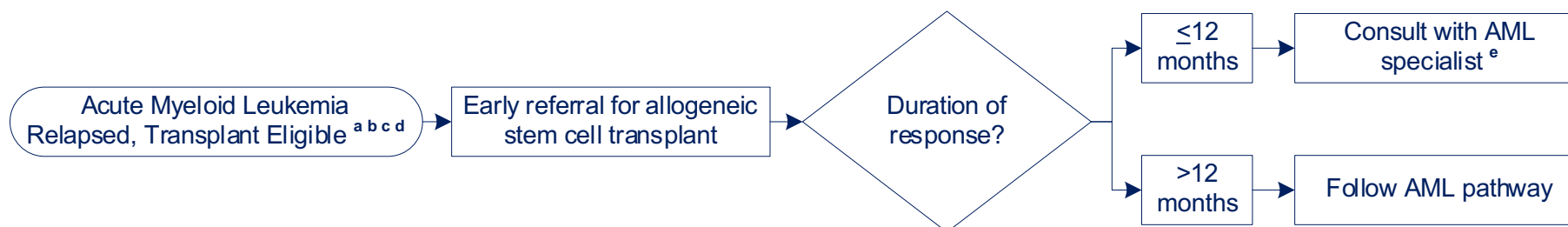
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# Acute Myeloid Leukemia – Relapsed, Transplant Eligible



Clinical trial(s) always considered on pathway.

<sup>a</sup> **Diagnosis at Relapse** relapse >6 months prior to therapy; must include flow cytometry (including CD33 expression) and myeloid NGS test (at minimum must include: ASXL1, BCOR, CEBPA, EZH2, FLT3, IDH1, IDH2, NPM1, RUNX1, SF3B1, SRSF2, STAG2, TP53, U2AF, and ZRSR2)

<sup>b</sup> **Supportive Care** includes transfusions with leukocyte depleted/irradiated units for patients who are transplant candidates; platelet transfusion for platelets 10,000/mcL, pRBC transfusion for Hgb < 7 g/dL, cryoprecipitate for fibrinogen < 150 mg/dL; tumor lysis syndrome monitoring, allopurinol and IV fluid prophylaxis, and rasburicase treatment if needed for patients with high WBC, hyperuricemia, and/or renal dysfunction; infection prophylaxis is recommended e.g., fungal, HSV/VZV, and bacterial

<sup>c</sup> **Transplant** referral for stem cell transplant requires pre-transplant evaluation and review through TRACER

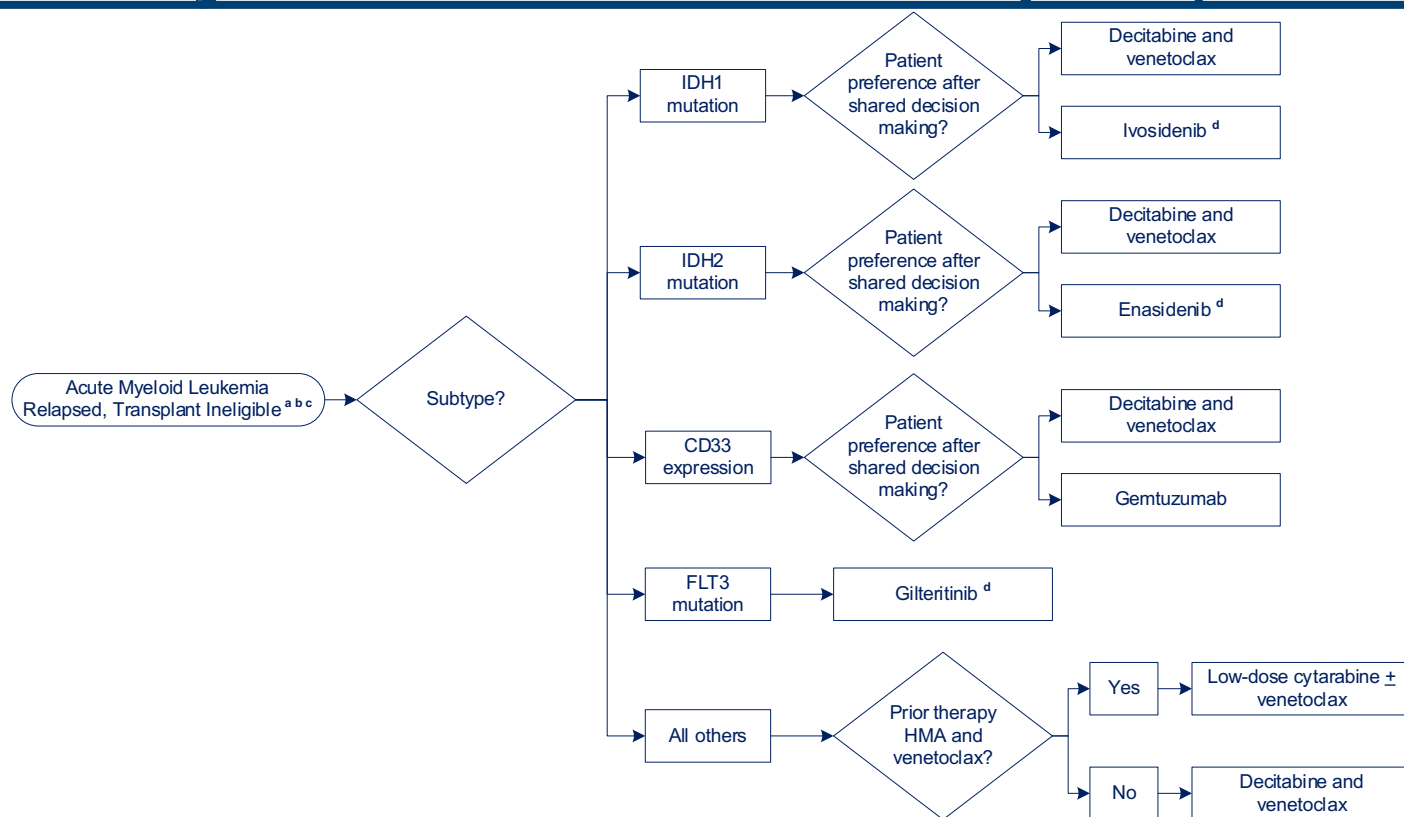
<sup>d</sup> **Transplant Eligible** assess by age, performance status, comorbidities, and social factors

<sup>e</sup> **AML Specialist** may include consult to NTO

**AML** Acute Myeloid Leukemia

**Clinical Trial Resources** <https://clinicaltrials.gov/> and <https://ils-forms.careboxhealth.com/?IRC=HCP>

# Acute Myeloid Leukemia – Relapsed, Transplant Ineligible



Clinical trial(s) always considered on pathway.

<sup>a</sup> **Diagnosis at Relapse** relapse >6 months prior to therapy; must include flow cytometry (including CD33 expression) and myeloid NGS test (at minimum must include: ASXL1, BCOR, CEBPA, EZH2, FLT3, IDH1, IDH2, NPM1, RUNX1, SF3B1, SRSF2, STAG2, TP53, U2AF, and ZRSR2);

<sup>b</sup> **Supportive Care** includes transfusions; platelet units ≤ 10,000/mcL; Hgb ≤ 7 g/dL; cryoprecipitate for fibrinogen < 150mg/dL; tumor lysis syndrome monitoring, allopurinol and IV fluid prophylaxis, and rasburicase treatment if needed for patients with high WBC, hyperuricemia, and/or renal dysfunction; infection prophylaxis is recommended e.g., fungal, HSV/VZV, and bacterial

<sup>c</sup> **Transplant Ineligible** assess by age, performance status, comorbidities, and social factors

<sup>d</sup> **Ivosidenib, Enasidenib, and Gilteritinib** require special monitoring for and treatment of differentiation syndrome

**AML** Acute Myeloid Leukemia

**HMA** Hypomethylating Agent

**Clinical Trial Resources** <https://clinicaltrials.gov/> and <https://ls-forms.careboxhealth.com/?IRC=HCP>



# Questions?

Contact [VHAOncologyPathways@va.gov](mailto:VHAOncologyPathways@va.gov)



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